

REPORT

OF

CLINICAL CASES

TREATED DURING THE SESSION 1859-60,

IN THE

SURGICAL WARDS OF THE ROYAL INFIRMARY,

UNDER THE CARE OF

JAMES SPENCE, Esq., F.R.C.S.E.,

LECTURER ON CLINICAL SURGERY.

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WARDS OF THE ROYAL INFIRMARY.

THE present Clinical Report is arranged on a somewhat different plan from that of last year. In that the remarks were principally directed to special cases of peculiar interest, which were given in detail, with remarks upon them; the synoptical part of the Report being kept distinct. In the present Report the nature of the cases treated has led me to consider them not so much in detail as individual cases, but as groups or classes, illustrating some principles of surgery; and hence I have arranged each class of injury or disease, together with the accompanying remarks, in the form of a distinct section.

The cases treated from 1st September 1859 till 1st September 1860 amount to considerably more than 600; and, consequently, it is only the more important that are included in the Report.

PART FIRST.

SECTION FIRST.—INJURIES OF HEAD.

Under this title are included cases of severe scalp wounds, concussion and compression, and fractures of cranium.

I. *Of Scalp Wounds, where the symptoms of concussion were not prominent.*

1. Anne G——d, æt. 48, was knocked down a flight of stairs, whereby the whole frontal bone was laid bare, and the flap, divided into two equal portions, reflected over the face. Silver sutures were used to keep the parts *in situ* after the bleeding vessels were secured. The hair was cut short. Cold applications to head, and the patient

kept on low diet. Afterwards, abscesses formed in both eyelids, and bare bone could be felt through the openings which were made to evacuate the pus. The parts, however, cicatrized without any exfoliation taking place, and no other untoward symptom occurred to delay the cure.

2. Jessie F——y, æt. 40, a fortnight before admission, fell from a height of three feet, and struck her forehead on a fender, causing two wounds, each an inch long, over the right eyebrow. The lower, over the orbital ridge, continued open; was painful; its edges pale and swollen, through which bare bone was felt. Slight giddiness was the only cerebral symptom. Rest, purgatives, and low diet, with local dressing of Zinc Lotion, produced a cure in three weeks.

3. William U——n, æt. 49, on the 17th January 1860, fell from a scaffold nine feet high; was picked up insensible, and brought to hospital. On admission, however, he had completely recovered consciousness; answered readily and intelligently. Pulse 72, of good strength. Pupils natural. On upper and back part of left parietal region two crescentic wounds, $1\frac{1}{2}$ inch long, were observed. Around these the hair was cut short, and cold cloths applied. Rest, with low diet and occasional doses of laxative medicines, formed the whole of the treatment, and on the 24th January 1860 he was dismissed cured.

4. Charles Y——g, æt. 25, was stabbed on the back of head in three places. Wounds varied in size from $1\frac{1}{2}$ to 3 inches. Rest, cold water dressing, with low diet, were the remedies employed. Cured.

5. Peter F——n, æt. 35. Incised wound, 2 inches long, over right eyebrow—closed by continued silken suture. On admission, eyebrow swollen and painful. Suture removed, and warm water dressing applied; afterwards, Zinc Lotion. Cured.

6. Peter R——y, æt. 9, fell down a stair, and received a wound 3 inches long on anterior part of head. This had been closely stitched with silk suture. On admission, two days after, the head and face were red and swollen; pulse 120; skin hot and dry; tongue foul. Stitches removed; hair cut short; warm water dressing to wound, while head and face were enveloped in cotton wadding. Purgatives, low diet, and rest were likewise used, and on the tenth day after admission he was dismissed cured.

7. Henry C——g, æt. 9, fell among some stones from a height of 12 feet, causing a wound near vertex, 4 inches long. Lips of wound brought together by two silver sutures, hair cut short, and cold to head. Patient was pale, cold, and trembling on admission but perfectly conscious. Pulse 80. Next day he became very feverish, complaining of pain in head. Stitches removed, purgatives administered, and two leeches behind ear. Four days after admission, face was slightly erythematous. Cotton wadding applied, with the internal use of Tinct. Mur. Ferri. With rest, low diet,

and occasional purgatives, the cure was completed on the twentieth day.

II. *Of Scalp Wounds, complicated with concussion.*

1. Wm. M——, æt. 33, fell from a height of 20 feet, and was immediately thereafter brought to the hospital. He was semi-conscious; answered curtly and incoherently when roused; breathing slow and laboured; pulse 40, full; pupils dilated, but tolerably sensitive. On the back part of head a superficial wound existed, beneath which a coagulum could be felt. The right eyelid was swollen and ecchymosed. Shortly after admission he vomited several times. The head was shaved, and cold applied; an enema was also administered. Under the repeated application of leeches, and bleeding at the arm, with the use of purgatives, the pulse rose to 54. On the fifth day the same symptoms returned, but readily yielded to the action of a blister. From this date till dismissed he was kept quiet in bed, on low diet, using occasional purgatives, and had no recurrence of bad symptoms.

2. Thomas B——e, æt. 28, was thrown from a horse. Two hours after, he was seen, and found to be in a state of semi-stupor. Pupils moderately active; skin pale; pulse 70, weak. On the evening of following day symptoms of strong reaction set in, which were moderated by the repeated application of leeches, and cold to the head, and the use of active purgatives. On the seventh day a blister was applied to nape of neck, and on the twelfth he left the house, cured.

3. James F——k, æt. 15, was thrown round and flung down by machinery. Besides much general bruising, he exhibited all the symptoms of slight concussion. Next day, patient complained of severe headache; muttered a good deal; pupils contracted and insensible; pulse 88, full. In addition to the cold applications already used, three leeches were placed behind each ear, and active purgatives administered, as well as an enema. On the twelfth day he left, cured.

4. Ed. G——y, æt. 26. Four days before admission, fell down some stairs. Since then he had been drowsy and restless at times, and suffered constantly from headache. Pupils contracted and fixed; pulse 56. Ordered aperient medicine and rest, with low diet; also cold applications to head. By this, partial relief was obtained, when a seton was introduced at the nape of neck, and on the seventeenth day he went out, cured.

5. James L——t, æt. 45, was brought in by the police on the 1st July 1860, in a state of unconsciousness; answered monosyllabically after loud questioning, or shaking; pupils dilated and sluggish; pulse 72, full. His breath smelt decidedly of alcohol. Over left mastoid process, and implicating the concha of left ear, an incised wound existed, which bled pretty freely. On vertex, two large abrasions were noticed. Next day, symptoms of concussion more

intense. Ordered purgatives and enemata, and four leeches behind each ear, with cold to the head, which was shaved. This afforded him much benefit, and headache and drowsiness only remained. On the 1st, a blister was applied, and on the 25th, patient was dismissed, at his own request.

6. D. M——l, æt. 45, fell from a height of one storey, and, besides other injuries, received a lacerated wound of scalp, on vertex, five inches long. He was very drunk on admission. Wound closed by four stitches, and cold applied to head. Next day reaction set in strongly. Ordered $\frac{1}{16}$ gr. Tart. Antim. every two hours, and also an enema. On the fourth day the stitches were removed, and warm water dressing used; matter was burrowing under scalp. On the fifth, face flushed; restless; during night slightly delirious. Abscess opened in scalp, and purgatives administered. On the twenty-first day he left, convalescent.

III. *Cases of Fracture of Skull, and those in which symptoms of Compression came on secondarily.*

1. Wm. G——g, æt. 8, was thrown violently against the corner of a chest, whereby a wound two inches long on anterior part of right parietal bone was produced. On admission, the wound bled freely, and from right ear and nostril there was considerable discharge of blood. The patient was pale, cold, and semi-conscious; pulse 108, very weak; pupils obedient to light. He was placed in bed. Hair cut short, cold dressings to head, and laxatives administered. On the second day a leech was applied behind the ear, to relieve headache. After this no bad symptom occurred, and on the eighteenth day he left, cured.

2. John G——n, æt. 39, while in a state of intoxication, fell down a flight of ten steps. He was quite insensible when admitted; bleeding from both ears (especially the right) and nostrils; breathing stertorous and slow. Pulse 60, weak; pupils contracted and fixed. Cold to head, and a dose of Croton Oil was administered. Next day, was semi-conscious, drowsy, and complained of severe headache; vomited violently. Ordered three leeches behind each ear. On fourth day, pain much less; pupils natural; quite deaf, and saw double with left eye; pulse 72. On the sixth day a blister was applied to nape of neck, with good effects. On the thirteenth day all the above bad symptoms returned, along with facial paralysis on right side; leeches and purgatives ordered. A seton was afterwards introduced, rest and low diet being constantly enjoined; and on the forty-seventh day he left, cured.

3. Christina S——n, æt. 36, on the 28th January 1860, was struck on the head by a quantity of hard lime and brick thrown from a house-top, three stories high. She was rendered insensible for some time, and lost a considerable quantity of blood from a wound, two inches long, situate over middle of superior part of os frontis. Admitted, February 7, 1860. Patient staggers as she walks; is dull

and listless; complains of severe pain around wound, the edges of which are pale brown and everted; nearly two inches of frontal bone can be felt bare. Has had repeated rigors since third day of the accident; vomits continually; pupils dilated and sluggish; pulse 60. Ordered aperients, and blister behind ear. No improvement following this treatment, Mr Spence trephined at the seat of the injury. No matter was found, but, immediately after the operation, the pulse rose to 66, and vomiting only occurred once, while the rigors never returned. Headache continuing, a seton was introduced; and on the 24th April 1860 the patient left, cured.

4. James B——r, æt. 28, fell on the 28th April 1860, and was admitted into the hospital 7th May 1860. Over occiput, a scalp wound existed, whose edges were swollen, puffy, pale brown, and everted. The bone was entirely denuded of periosteum. He had headache, dimness of vision, and singing noises in the ears. Ordered rest, low diet, purgatives, and leeches. On the 13th an abscess below the wound was opened. On the evening of the 18th he was seized with rigors and vomiting. A blister applied to nape of neck, head to be shaved, and mustard cataplasms to epigastrium. The rigors and vomiting, with high pulse and occipital pain, continued unabated until the 19th, when delirium, and then coma, set in. Patient died on the 22d, at noon. His friends would not allow trephining to be performed.

Post-mortem.—May 24th. Membranes generally adherent. Beneath necrosed occiput a quantity of purulent matter was found. Dura mater at same place sloughing, but entire. From occiput, a fissured fracture extended upwards, forwards, and downwards, terminating at the post clinoid process. No pus was found between the membranes and brain, nor in the brain substance itself.

5. Wm. W——r, æt. 21, fell from the third storey of a house, and was soon after brought to the hospital insensible, bleeding from nose and ears, more particularly from right, through which masses of brain substance oozed out. He died about an hour after admission.

Post-mortem disclosed extensive fracture of base.

6. J. S——r, æt. 4, was crushed under a coping-stone. When brought to hospital she was unconscious, bleeding from left ear and nostril, conjunctivæ ecchymotic, breathing hurried and difficult. Hair was cut short, cold applied, and enemata and purgatives administered. Under this treatment she regained consciousness on the third day, and left perfectly well on the fourteenth.

Remarks on the Cases recorded under Injuries of the Head.—Although each of the three forms of injury, which have been grouped under this general title, possesses its own distinctive peculiarities, demanding attention in treating them, they have one feature in common, and that which gives them their greatest importance, viz., the effect they produce primarily or secondarily on the brain or its membranes. It is from this point of view I intend principally

to consider the cases in this department of the Report, as several of them serve well to illustrate the symptomatology and indications for treatment of some of the effects of head injuries, and more especially of one of the more insidious forms. In the cases reported, even in those of fracture, it will be noticed that complete compression as a primary condition was very rare,—more commonly, concussion or a severer form of it verging on compression, so that the secondary dangers of concussion were those to be guarded against or treated.

The first of these dangers, extravasation of blood leading to compression, occurs in two very different forms. The course and nature of the symptoms of the form most generally described, are so marked as to arrest the attention even of a careless observer. After the insensibility of concussion has passed off, reaction been established, and the patient for a time restored to consciousness, he again becomes drowsy, and gradually lapses into a state of complete coma, with slow laboured pulse, stertorous breathing, dilated pupils, etc., rendering the nature of the case unmistakeable. But this series of events is by no means the most frequent, and the cases in the Report present no instance of it. There is, however, another and more insidious form of passive extravasation, which several of the cases serve to illustrate. Unless we are on the watch, there is nothing in the appearance of the patient which would excite alarm. Generally, he seems to be suffering little from the injury; complains, perhaps, of occasional headache, followed by a dull, uneasy sensation; but, if we examine carefully, we find that the pulse either never rises to the natural standard after the first stage of concussion has passed off, or what is more common, after having regained its natural frequency, or at first been frequent after reaction, it then begins to fall below the natural standard to 60, 52, or 40 beats per minute; this decrease following in a marked manner the occasional attacks of headache. The pupils are rather dilated, and if tested by the application of the light of a taper, contract in a sluggish and irregular manner. If these conditions be unnoticed or neglected, the patient, after the lapse of some days, may gradually become comatose; or, more generally, excitement, delirium, squinting, and convulsions precede by a few hours the symptoms of compression, which close the scene. In none of the cases in the Report did these fatal results take place, although in many of them, more especially in those of M——n, G——y, B——e, and G——n, the low oppressed pulse and other premonitory symptoms manifested themselves; but these indications being watched for, were promptly met by active treatment, and thus bad consequences prevented. The great danger in these cases is, as I have already said, that, owing to the slight general symptoms and the trifling alterations in the state of the pulse in the early stages, the surgeon may neglect to guard against subsequent reaction, with its accompanying extravasation. From what I have seen in the *post-mortem*

examinations of cases in which the progress was such as I have described, I believe that the symptoms are due to a passive form of extravasation occurring at different times. Perhaps a certain amount of blood may have been poured out at the time of the accident, or slowly as the shock passed off, causing a slighter form of compression, as indicated by the somewhat dilated and sluggish pupil and the slow oppressed pulse. If no more extravasation occur, the symptoms may pass off without further bad effects; but if the patient, feeling not very ill, be excited in any way, or allowed to move about, attacks of headache ensue. Each attack, attended by falling of the pulse, greater dilatation and sluggishness of the pupil, marks the further effusion of blood. Next, the clot so increased in bulk, may, by its presence, excite irritation of the brain and its membranes; and then we have the delirium and squinting without apparent excitement of the pulse; but soon, as the escape of blood becomes more rapid from the restlessly excited state of the patient, sudden convulsion followed by complete compression results. In one fatal case, where the original injury was stated to be very slight, and where the patient could scarcely be made to see the necessity for any treatment, death occurred on the fifteenth day after the injury, preceded by excitement suddenly terminating in compression. On examination I found an enormous amount of blood effused, the greater portion of the mass being quite soft and evidently recent; whilst other portions, varying in consistence, showed that the extravasation had occurred at different times. Connecting these *post-mortem* appearances with the train of symptoms observed in such cases, I have long considered the slow oppressed pulse and sluggish pupil (especially when preceded by fits of headache, and the sensation described by patients, like a "rushing sound or feeling in the head") as indications for diminishing the force of the cerebral circulation so as to prevent further extravasation. The means I use to fulfil this indication are, depletion by means of leeches applied to the mastoid region; venesection in severe cases, or where the patient is young and strong; cold applications to the head, and free purgation. In a great many cases, if leeches be applied to the mastoid region, where the pulse is first noticed becoming slow, after reaction has been established, they will be found sufficient, if combined with cold to the head and the use of purgatives; but if the symptoms threaten to recur, the leeching should be repeated. In severe cases I have found most decided benefit from venesection, in alleviating the dull headache and tendency to coma, at the same time relieving the cerebral oppression, as evidenced by the slow, laboured pulse soon becoming more normal, and by the rapid improvement of all the other symptoms. In young and robust persons I have repeated the bleeding with advantage; but even in those of more advanced age or weaker constitution, it may be practised with perfect safety, if we carefully watch its effects, seeing that we can arrest the depletion when we please.

If antimony could be employed without the risk of inducing vomiting, it would be serviceable in preventing reaction after depletion; but unfortunately, even in minute doses, it is so uncertain in this respect, that I seldom have recourse to it.

At a more remote period after the injury has been received from the fifteenth to the twentieth day, or later—a similar train of symptoms, though less marked, sets in, depending, I believe, upon serous effusion from subacute or chronic congestion of the vessels of the membranes. In those cases, blisters to the nape of the neck or occipital region, combined with the use of mercurials and laxatives, will generally be found the most efficacious plan of treatment; but even at this stage I have occasionally had recourse to leeches with great benefit.

Of that class of cases in which the symptoms seem to depend on suppuration within the cranium, the present Report affords two instances, viz., those of James B——r and Christina S——n. Both patients were admitted into hospital about ten days after the infliction of the injury. In the case of B——r, though the dangerous symptoms were somewhat slower in manifesting themselves, yet the unhealthy state of the scalp-wound, and the denuded bone, in conjunction with headaches, etc., gave rise to an unfavourable prognosis; and when the more urgent symptoms supervened, combined with the formation of a boggy swelling which, when opened, exposed a further portion of bare bone, I felt no hesitation in recommending trephining. This, however, was not permitted, and the patient died comatose. From the *post-mortem* appearances, I still think that the operation was advisable, as affording a chance of relief. The existence of the fissure of the base could not be determined during life; and, moreover, as it was attended with no displacement, and as the only place where the dura mater was diseased was at the point corresponding to the puffy swelling and necrosed bone, I cannot consider such fissure as in itself a contra indication, especially if we view it in connection with the successful result of some other cases of severe fracture at the base which are to be found in the Report.

The case of Christina S——n illustrates the difficulty of diagnosis in this class of cases. Before her admission, on the tenth day after the injury, she had had repeated rigors, intense headache, want of sleep, and vomiting, together with imperfect power of controlling the movements of her limbs. Notwithstanding remedial measures, the bad symptoms increased; the pain became intense, and, at the same time, a kind of semi-consciousness as to surrounding objects developed itself, the wound of the scalp was unhealthy, a piece of dry bare bone was exposed, and limited facial paralysis supervened. Under these circumstances, in consultation with my colleagues, it was considered that, to delay the operation of trepan, would be to deprive the patient of any chance of recovery. The operation was accordingly performed, but no pus was found; yet

from the day of the operation the vomiting ceased, and the patient progressed slowly but uninterruptedly to recovery. This case, I think, is instructive, as illustrative not only of the difficulty in arriving at certainty of diagnosis in such cases, but also as showing that, under such circumstances, if we do not find purulent matter, we do not add to the patient's danger by removing the portion of dead or dying bone. Nay, I cannot help thinking that the removal of that source of irritation, and the direct depletion and relief of tension, proved the means of saving this patient, judging from the progress of the symptoms prior and subsequent to the operation.

But whilst I think that such urgent symptoms, in connection with the unhealthy state of the wound and dead bone, fully warrant the operation, yet we must not forget that, in the case of an open scalp wound, there are greater sources of fallacy as to diagnosis than where we have the formation of the boggy, puffy tumour contemporaneously with, or closely following upon the cerebral symptoms. In the latter, the probabilities of such swelling corresponding to unhealthy conditions of the dura mater and bone secondarily affecting the scalp amount almost to a certainty; whereas in the former, the unhealthy state of the scalp wound may depend upon a mere superficial necrosis of the denuded bone; and the cerebral symptoms may be not directly connected but merely coincident with this.

I have already dwelt at such length on the foregoing points in reference to injuries of the head, that I can merely advert to the successful results of some of the severe fractures of the base of the skull, as showing that we should not despair even of such cases; for, by carefully watching symptoms and applying proper remedial measures, we may assist nature in the curative process. I would specially notice, as an example of this, the case of G——n, in which there was evidence of extensive fracture, with great bleeding from both ears and nose, injury of ethmoid, and subsequent fœtid discharge from that region. The most remarkable recovery, however, of fracture of the cranium was that of the child whose head was fairly crushed by a large cope-stone (so heavy as to require two men to lift it from off the child). When brought into hospital, her head seemed flattened; the cranial bones felt loose, as if broken up; and the eyeballs protruded. The child was completely insensible from compression, and remained so for nearly three days. At first, recovery seemed almost impossible; and the treatment was necessarily limited to the application of sinapisms to the epigastrium and feet, cold cloths to the head, and enemata; yet, when she once began to rally, she recovered rapidly, and wonderfully little deformity of the head remained. On leaving the hospital she seemed quite lively and intelligent.

SECTION SECOND.—FRACTURES.

Subjoined is a tabular view of the cases of fracture (in all 47) treated in the house, stating the seat of fracture and the result. The more important cases are shortly detailed :—

				Cured.		Died.	
Of Vertebrae,	3	...	...	2	...	...	1
Of Ribs,	5	...	...	4	...	...	1
Of Pelvis,	2	...	...	...	...	...	2
Of Femur,	10.—Three through shaft, cured. In one case, refracture immediately above the former fracture, on third day after dismissal. One through trochanter, cured. Three through neck, relieved; and one through condyles into knee, cured.						
Of Leg,	21			Under Treatment.			
Simple fracture of tibia and fibula,	7	...	...	7	...	...	...
Compound do. do.,	5	...	...	2	...	1	2
Comminuted do. do.,	1	...	...	1	...	...	...
Tibia, alone,	4	...	...	4	...	...	...
Fibula,	4	...	...	4	...	...	...
Of Humerus,	4						
Simple, but complicated with general bruising,—1 cured.							
Comminuted,—1 cured.							
Ununited,—1 under treatment and 1 cured.							
Of Radius and Ulna,—1 compound and comminuted; cured.							
Of Upper Jaw,—1 comminuted; cured.							
Of Lower Jaw,—1 simple; cured.							

1. Patrick B——s, æt. 40, was doubled up and crushed by the weight of a horse falling on him, by which several dorsal vertebrae were fractured. Along with complete paraplegia, a low form of peritonitis set in, and he died on the fourth day.

2. John S——s, æt. 26, a strong, muscular man, fell backwards over a rail seven feet high. Complete insensibility immediately followed the accident; but on admission, an hour afterwards, consciousness was partially restored, with, however, all the symptoms of paraplegia, and involuntary emission of semen, urine, and fæces. A fracture was discovered at the sixth cervical vertebra. The head and neck were bandaged to a pillow, and the patient placed in bed. He gradually recovered the power of voluntary movement, and sensation was complete. On the twenty-fifth day he went out, and, two weeks after, resumed his employment as a brewer.

3. Peter K——r, æt. 38, during the delirium accompanying erysipelas of the head, jumped from the third storey of a house, whereby he sustained a fracture about the middle of the dorsal vertebrae. For the first ten days he had all the symptoms of paraplegia, requiring the constant use of the catheter. Urine phosphatic. Ordered Nitric Acid. As the bowels continued constipated, Ext. Nuc. Vomic., gr. 1, with Ext. Coloc., was administered thrice a-day. On the sixteenth day he passed his water without the use of an instrument. After this, his appetite and strength gradually improved, and he only

suffered from pain over seat of injury, for which a seton was introduced, with benefit. Three months and a half after the accident occurred he walked perfectly, and still continues well.

4. Alex. C——n, æt. 24, fell before a railway waggon, which passed over his leg, occasioning a compound comminuted fracture. As the external wounds were small, and the main vessels entire, the limb was placed on a M'Intyre splint, and subsequently on a wire one. Abscesses formed, but no necrosis took place. After a time, starch bandage was used, and a good cure accomplished.

5. Patrick R——n, æt. 35, sustained a fracture of fibula, to which poultices were applied constantly for one month prior to admission. Abscesses formed around ankle-joint and foot, which were freely opened, and the limb placed on a leather splint. He recovered without any necrosis occurring.

6. Francis P——n, æt. 35. Leg crushed by wheels of railway carriages, causing severe compound comminuted fracture at lower third. Leg amputated two inches below tuberosity of tibia, by long posterior flap. Rigors on third day, followed by sloughing of edges of flaps, especially upper, laying bare the bone, which afterwards necrosed slightly. Ultimately, a good stump formed. Cured.

7. Duncan C——, æt. 43, of dissipated habits, fell from a height of thirteen feet, and suffered a severe compound comminuted fracture of right leg and simple fracture of left fibula. Amputation at upper third, by long posterior flap. On the second day pulse rose to 134, and on the fourth all the symptoms of pyæmia set in; on the fifth, sloughing of flaps appeared, with great prostration of system. Death on seventh day.

8. Walter H——t, æt. 26. Railway accident,—compound comminuted fracture of leg at middle, accompanied with longitudinal splintering of tibia and great laceration of soft parts. Amputation at lower end of femur, by long anterior flap of skin taken from surface over knee. Slight after-bleeding in the evening. Everything went on well until the thirteenth day, when he complained of abdominal pain, followed shortly afterwards by rigors and jaundice. Pyæmia gradually manifested itself more decidedly but slowly, and patient died on the twenty-fourth day, slight necrosis of the end of the bone having been made out a few days before.

Remarks on the Cases of Fracture.—The fractures of the vertebræ furnish us with two instances of successful results out of the three cases recorded. As a general rule, such success is unusual. The size of the spinal cord, and the nature of the osseous canal through which it passes, render it almost impossible that fracture attended with any displacement can occur without such compression or injury of the cord as must lead, either primarily or secondarily, to interruption of its function, and consequent paralysis of the parts below the injury. Fractures, with displacement, occurring in the cervical region, may, especially from the vital functions interrupted, be regarded as almost certainly fatal; yet, in the case of

S——, we have an instance of such a lesion, with considerable displacement, terminating successfully. Judging from the train of symptoms observed, although the displacement and crepitus on movement, left no doubt as to the nature of the injury, it nevertheless seems pretty clear, that the medulla spinalis must have escaped direct lesion ; for the complete paralysis and other symptoms, at first urgent, gradually passed off, so that after some hours all the formidable symptoms had disappeared, and in a few days the patient felt so little uneasiness or inconvenience, that it was difficult to make him believe the serious nature of his injury, or get him to keep quiet in bed, and avoid moving his head. It is probable, therefore, that the original urgent symptoms were due either to severe concussion of the cord, or perhaps to a certain amount of direct compression without laceration, the compression being relieved when the patient was placed in bed, with the head supported. For my own part, I incline to the former view, and for this, among other reasons, that there never seemed to be any apparent alteration of the displaced bones, the shortening and bulging forward of the front of the neck, and the irregular depression and prominence felt posteriorly, being as marked, after the bad symptoms had passed off, as they were before. The interest of this case, however, does not terminate with the cure of the primary injury, for, contrary to my wish, he left the hospital on the twenty-fifth day after the accident, saying he felt quite well, and would be very careful of himself at home. I subsequently heard he had returned to his work, and on the 11th of March he applied to be re-admitted, on account of gradually increasing paralysis, which had rather suddenly supervened a few days before. The quick pulse and febrile condition of the patient, together with the difficult respiration and the paralysis affecting parts deriving their nervous supply from above the original seat of injury, led me to infer that secondary changes, the result of irritation and inflammation of the cord and its membranes, were taking place, if, indeed, softening had not actually occurred, and gave me a most unfavourable opinion of the case. Under treatment, however, the bad symptoms again gradually disappeared, and he was finally dismissed cured.

The case, independent of other points of interest, is instructive, as encouraging to careful treatment, even in cases all but hopeless, and as showing the necessity for enforcing absolute and prolonged rest and treatment, although the patient or his friends may consider all danger as past.

In regard to the fractures of the extremities, I would only remark, that the list recorded affords but a very imperfect idea of the number of fractures actually treated, because, except in special circumstances, cases of fractures of the upper extremity are not admitted into the hospital, but are treated as out-patients, and hence, though they come to the hospital, and form subjects of clinical instruction, no regular records are kept of them.

As to the plans of treatment adopted in the simple fractures of the lower extremities which are mentioned, I have not thought it necessary to detail them. I may, however, state them here generally. In cases of fracture of the shaft of the femur, I employ the long splint, together with two short splints, fixed with slip knots on each side of the broken bone, to prevent any lateral displacement. In fractures of the neck of the femur, the long splint, without the lateral support, is used; but in many cases of old infirm persons, in whom the use of the splint cannot be continued, I have recourse to the following plan.—A long narrow pillow or pad is placed between the legs, extending from above the knee to below the ankle, and the injured limb is secured to the sound one, by bandages at the knees and ankles, a broad flannel spica bandage being applied round the pelvis, and over the upper part of the injured thigh, so as to fix the thigh and pelvis. I prefer this plan to the double incline of pillows, as it not only ensures greater fixity and extension, but also enables us to place the patient occasionally on the sound side, and so diminish the risk of bed-sores forming on the back. In cases where, from extensive bruising of the body or limb on the injured side, or other causes preventing the use of the splint, and where, at the same time, full extension is desirable, I apply the long splint on the sound limb, and then keep the injured limb fully extended, by fastening it to the sound one thus fixed.

In cases of simple fracture of the bones of the leg, I find the simplest and most satisfactory plan is the use of two lateral paste-board splints with foot-pieces, moulded to the limb, secured by slip knots, the limb being laid on the outer side, and flexed to a greater or less degree, according to the nature of the fracture. In cases of very oblique comminuted or compound fractures, or in cases of fracture of the tibia very high up, the use of Liston's splint, properly padded and adjusted, is the treatment I resort to. In fractures near the malleoli, attended with splitting of the lower part of the tibia, or separation of that bone from the fibula, in which the heel and foot are retracted, and the bones of the leg projected, and where the tendency to retraction, recurring after coaptation, is considerable, the stirrup splint well padded and placed on the front of the leg (used either alone or combined with narrow lateral splints), affords a fixed point to which we can bring forward the heel by bandaging, whilst, at the same time, it presses upon the bones of the leg, and prevents them projecting forwards. In cases of Pott's fracture of the fibula above the malleolus, attended with eversion and twisting of the foot, Dupuytren's splint, applied along the tibial side of the leg, is used as a fulcrum over which the foot is kept inverted, whilst, at the same time, slight extension is preserved. For some cases attended with retraction of the foot as well as eversion, the stirrup splint may be used with advantage, the inner horn of the stirrup being made the fulcrum over which the foot is kept inverted, whilst retraction is obviated by bandaging the heel forwards to the splint.

Of course, in the corresponding fracture of the malleolar part of the tibia, with inversion, the Dupuytren splint is applied on the fibular side, to keep the foot everted. With exceptional instances, I have always employed these simple methods, so long and successfully used in this hospital; and after very extensive experience in treating fractures in Hospital, Dispensary, and private practice, I see no reason for changing to other methods, which certainly could not afford me better results, and which seem to me attended with some risk, from which these ordinary plans are free. I allude, particularly, to the use of the starch bandage, and the plaster of Paris methods of treatment, which are now much used on the Continent. In regard to the starch bandage applied after the lapse of some weeks, when all risk of swelling, or other results of the local irritation produced by the accident have passed away, and, as a means of abridging the period of the patient's confinement, I not only have no objections to it, but have recourse to it very generally. But, used from the very first, I think it objectionable, as preventing the surgeon from observing the state of the limb, and guarding against mischief. The advantage which some claim for it, that the patient may walk about with a crutch in a day or two after the injury, I look upon as no advantage, but on the contrary, I think the patient would be then much better in his bed, even supposing he felt the inclination to walk about. The plaster of Paris method, of course, has all the disadvantages of hiding the fractured limb from the surgeon's view, and, if I may judge from personal experience, when working with that material in taking casts, it must be anything but pleasant to the feelings of the patient, when it contracts in setting. I have seen a considerable number of cases of fracture of the leg put up in this manner in Germany, and I can easily understand that many such cases do well enough; but it is quite as likely that, in many cases, the mass of stucco in which the fractured limb is embedded, may be, very literally, a whited sepulchre. In a word, I think when we possess well-tryed, simple, and successful plans of treatment, we should be very chary in departing from them. Novelty is not always progress, and, unfortunately, many novelties in surgery at the present day seem to consist in departure from simplicity of treatment.

SECTION THIRD.—WOUNDS.

From a numerous list of cases of this class, the following are selected as the most important or instructive:—

1. Charles M——r, æt. 13. Wound at base of middle and ring fingers, causing gangrene. Amputation. Cured.
2. John S——n, æt. 38. Thumb nearly torn from hand by bursting of a gun. Skin presented the appearance of an incised wound; bones and muscles blackened and destroyed. Amputation. Cured.
3. James G——n, æt. 14. Lacerated and contused wound of hand,

caused by the bursting of a pistol, part of which had gone through first and second metacarpal bones, fracturing these, and destroying soft parts entirely. Amputation of whole of thumb and forefinger, except head of metacarpal bone, which was uninjured. Cured.

4. Walter W——n, æt. 35, while working in a pit, suffered a severely lacerated wound of thigh by the bursting of a large powder-flask which he held in his hand. The skin was stripped off the upper part of thigh, on its inner and anterior surfaces, for about 7 inches square; the muscles torn and charred; the common femoral was bared, and seen pulsating for several inches of its course. Mr Spence performed amputation at the hip-joint, first tying, however, the common femoral where exposed, and taking one large flap from the outer and back aspects of the hip. Patient, besides having lost a good deal of blood, was much exhausted by a long journey by railway. Opiates and stimulants were administered, but he sank on the morning of the second day. No bleeding occurred after the stump was dressed.

5. Michael L——n, æt. 38, with enormously large spleen and the other signs and symptoms of leukæmia, had a small abscess in the leg opened. Wound continued to bleed for four days; arrested by a compress; afterwards sent to Medical wards.

6. Thomas M——e, æt. 21, by an unfortunate stroke of his sickle, nearly divided the left tendo achillis. He was afterwards sent to hospital, and had the foot retained in the slipper apparatus until union took place.

7. George N——t, æt. 41, was stabbed in the lower part of abdomen with a clasp knife, producing a wound half an inch long, situated in the left lumbar region, close above the iliac crest, and two inches posterior to the anterior superior process. Bleeding *per saltum*, and very copiously. One artery ligatured; its other extremity, which could not be secured, was closed by pressure. Patient faint; anxious expression; pulse 120, feeble. Ordered wine and opiates. No peritonitis ensued, and the patient made a good recovery.

8. James C——x, æt. 38, received a penetrating wound of abdomen, situated a little to the left of the mesial line, commencing just above pubes, and extending upwards for about two inches. From this opening a considerable portion (about 12 inches) of small intestine protruded. This could not be returned until Mr Spence enlarged the wound in the peritoneum, which, at first, would only admit of the point of little finger being introduced. The right epigastric artery, which lay close upon the track of the original cut, was tied above and below, and the lips of the wound being now secured by stitches; a pad and bandage were applied. There were other wounds besides this on various parts of patient's person, all inflicted with a clasp knife. Patient was pale, faint, and anxious; pulse 88, feeble. Ordered wine and opiates. There was no injury to bladder. At the end of 24 hours peritonitis set in, and he died about 48 hours after admission.

9. Cunningham G——t, æt. 17, fell from a ladder 40 feet high,

and was impaled on the spikes of a railing. On admission, a large penetrating wound of the lower part of thorax, on the right side, was found close to the vertebræ. Fracture of several ribs could be made out on same side, but not very exactly. Dark-coloured blood flowed freely from the wound, mixed with bubbles of air. He was placed in bed on his right side, in order to favour the exit of the blood. The amount of shock was great. Bleeding ceased eight hours after admission. Both sides of chest continued resonant until 40 hours after reception of accident, when he sank.

Post-mortem. Extensive pleural adhesions on both sides; in right sac about 10 $\frac{3}{4}$ of grumous serum. At angles of ninth and tenth ribs, a lacerated wound, two inches long, from above downwards, filled with torn muscular texture and clot. Ninth and seventh ribs broken at angles; the head of former also dislocated forwards. At the upper and back part of lower lobe, the lung texture was slightly lacerated for about an inch, the surface being covered with small clots plugging up the larger wounded vessels. Both lungs were congested, but perfectly crepitant.

10. George L——e, æt. 19, received a severe wound with a cork-cutter's knife, dividing the tendons of the supinator longus and extensors of the thumb, etc., the radial and superficial volar arteries, and penetrating deeply through the epiphysis of the radius into the joint. Vessels were tied at both extremities; the skin brought together by silver sutures, and the limb laid on its inner side, resting on a leather splint, to which it was bandaged. Cured.

Remarks on the Cases of Wounds.—Amongst the selected cases of wounds mentioned in the report, there are four—viz., the cases of W——n, C——x, G——, and L——e—which are specially worthy of notice, on account of their nature and severity.

In W——'s case the injury was inflicted by the ignition and explosion of a large iron flask of gunpowder (probably one of those iron flasks or bottles used for holding mercury), the thickness of iron being about $\frac{1}{4}$ of an inch. The wound, therefore, was exactly similar to those caused by the bursting of shells; and the flask being in close contact with the body, the effects were most intensely destructive. The thigh seemed almost separated at the inner and upper part. The femoral artery, largely exposed and isolated for some extent, had, strangely enough, escaped being divided. The vein, however, seemed to have suffered from twisting, as the blood was coagulated in it; the pectineus, adductors, and the hamstring muscles at their origin from the tuber ischii, were divided and torn into shreds, whilst the front of the abdomen and lower part of the thorax were scorched by the explosion. Stimulants and opiates had been given to relieve the state of shock; but as I found, on examination, that blood was being lost from the divided branches of the profunda oozing into the tissues, and that the patient would sink instead of rally, I determined to amputate at the hip-joint, as affording the only chance, and performed the operation,

assisted by my colleagues, Professor Miller and Dr Watson. The patient rallied somewhat next morning, but gangrene attacked the edges of the wound, and he gradually sank.

The chance afforded, under such circumstances, by amputation at the hip-joint, is, of course, very small; but, as it seems to me, there is no alternative, unless we are to look on and see the patient writhing in agony, and bleeding to death. And the operation performed under chloroform at least diminished his suffering, by removing the lacerated limb.

The case of C—x is an example of a penetrating wound of the abdomen inflicted with a sharp cutting instrument, and complicated with intestinal protrusion, under circumstances which rendered it a very aggravated form of that injury, and instructive as exemplifying all the points to be attended to in the treatment of abdominal wounds. As the patient had crawled for some little distance along the ground after being wounded, the coil of small intestine which had protruded was covered with blood, and had suffered from exposure to cold. His pulse was small, quick, and irregular,—partly from loss of blood, and also from the pain and nausea induced by the hernial protrusion; and there were great restlessness, jactitation, and abdominal pain. As the bleeding had ceased before I saw him, it was evident that the protrusion was the first thing to be attended to. The blood having been washed away by pouring a stream of tepid water over the intestine, I next carefully examined every part of it, and the mesentery connected with it, lest there should be any wound of the gut or blood-vessels, before I attempted reduction. Having satisfied myself on these points, I proceeded to examine the wound and the relations of the neck of the protrusion. On doing this, I was somewhat surprised to find two wounds in the muscular parietes, one lower down than the wound in the integuments, and about an inch nearer the mesial line than that through which the intestine protruded, and smaller in size. On reflection on this feature in the case, I think it probable that the knife had not penetrated directly backwards, but must have passed in a somewhat horizontal direction, and so have transfixed the muscular parietes,—the shortness of the weapon possibly preventing it reaching the integuments to wound them a second time. I found that the opening, through which the hernia protruded, was very tightly constricted at its neck; and I accordingly proceeded to enlarge it with a probe-pointed bistoury. This required more caution than in an ordinary case of hernia, as it was difficult to determine accurately the position of the opening in reference to the epigastric artery; but, cutting directly upwards for a few lines, I got the point of my finger introduced so as to feel my way, then divided the parietes more freely in the same direction, and reduced the protrusion. I would strongly inculcate the necessity for care in dividing the constriction in similar cases; for, after reducing the bowel, I felt the epigastric artery lying close along the edge of the wound, and quite bare for nearly

three-fourths of an inch. This was another feature in the case to be considered. Taking into account that there had been considerable bleeding from the abdominal wound, and the probability that this exposed portion of the vessel had been injured, and might, after reaction, lead to internal hæmorrhage, I thus secured it. Drawing it outwards with a small blunt hook, I passed a ligature by means of an aneurism needle, divided the loop of the thread, drew one portion of it upwards and the other downwards, as far as the vessel was exposed, and tied them, so preventing all risk of bleeding. I then closed the wound carefully with silver sutures, supported by a flat compress of lint, to prevent any further tendency to protrusion. For a short time no bad symptoms appeared, and he rallied somewhat; but intense peritonitis supervened, and this, with the previous loss of blood, speedily proved fatal.

In the case of G——t, we have an extreme example of a large penetrating wound of the chest, complicated with fracture and dislocation of the ribs, and wound of the lung, attended with hæmorrhage. In such cases, the difficulty in treatment is to prevent, on the one hand, the accumulation of blood within the thorax, and on the other, the entrance of air into the cavity, causing collapse of the lung. If, indeed, the hæmorrhage proceed from a wound of an intercostal artery, the indication is distinctly to secure it by ligature or compress; and had such been the source of bleeding in this case, the vessel could have been readily enough secured; but careful examination with the finger proved that was not the case, and, indeed, the character of the blood, and its admixture with air, pointed to the wounded lung as the source. Some surgical authorities advise, under these circumstances, that the wound should be closed, so as to arrest the flow of blood and prevent the entrance of air into the cavity. But, I confess, I never could see the rationale of this treatment; for, though the external flow of blood may be arrested, it favours, all the more surely, internal hæmorrhage and pressure, causing collapse of the lung in a form more dangerous, because less easily relieved, than that caused by the entrance of air. Indeed, if the amount of hæmorrhage from a wounded lung be great, I think the collapse of the lung, caused by the pressure of the air in the pleural cavity, may rather be considered beneficial, as the circulation through the lung is thereby greatly diminished, the wound contracted, and the hemostatic processes favoured. If the opposite lung be healthy, the patient breathes tolerably easily when laid on the injured side; and when time has been given for the wound in the lung to be firmly closed by clot and lymph, the pneumo-thorax can be relieved by drawing off the air by means of a canula and exhausting syringe, and the wound can then be closed. It was with these views that I had the patient laid on his right side so as to allow the blood to escape from the thorax, whilst by the arrangement of the pillows on which he lay, and of the bedclothes, air could not enter in very large quantities; and for a time his difficulty of breathing and other uneasy symptoms

were relieved by this position. I was struck at the time that there should be so little collapse of the lung, considering the size of the wound, and that he had been lying on his back whilst it was exposed. This, however, together with the rapidly fatal issue of the case, was fully accounted for by the adhesions of the pleuræ on both sides of the body, revealed by the *post-mortem* examination, and the history of the case, that he had only recently been discharged from medical treatment on account of double pleurisy.

The last of these cases, that of L——e, offers an example of an extensive incised wound, dividing a bone, one of the main arteries of the limb, and freely opening a large articulation. Indeed, I never saw a hand so nearly severed by a single stroke. The result was most satisfactory. Scarcely a single bad symptom arose, and there seems some prospect that, by gradual passive motion, the joint may regain a considerable degree of movement. I believe that the very extent of the wound of the joint probably accounts for the favourable progress; for I have often observed, that in free openings into articular cavities, the local and constitutional symptoms are proportionally less than in small or punctured wounds, where the discharges are confined, and give rise to irritative fever, whilst from larger wounds they readily escape, and the inflammatory action is of a more healthy character. As to the method of treatment adopted, the indications to be fulfilled by the different parts of it are so clear, that I need do no more than state them: 1st, The arrestment of hæmorrhage, by tying both ends of the wounded radial artery; 2d, Washing out the clots from the joint; 3d, To close the wound, applying a leather splint, moulded so as to receive and support the ulnar side of the hand and keep the parts fixed, and at the same time allow the wound to be dressed readily without disturbing the position of the limb.

Case of Traumatic Tetanus following Wound.—James M——, æt. 49, on the 24th November 1859, fell, and received a lacerated wound of the forehead, an inch in length. He began to suffer pain and stiffness of the lower jaw on the 27th November, and this continuing to increase, he was admitted on the 29th November 1859. The wound was superficial, but sloughy. Marked inability to depress the jaw or protrude the tongue, together with a degree of pain at the lower part of chest, were complained of. The features were natural; bowels regular; and no convulsions had occurred. Ordered a warm bath and a purgative of calomel and jalap; the jagged sloughy textures in the wound to be divided down to the bone; and cupping over the spine, in the cervical and dorsal regions.

30th. Diaphragmatic pain, and also difficulty of breathing and swallowing, increased. Bowels opened twice. Ordered Tinet. Cannab. Indicæ m xxx. every four hours. *Vespere*. Fits of dyspnœa very intense and of frequent occurrence, especially excited by attempts at swallowing. Patient breathes hurriedly, often 50 re-

spirations per minute, the head for the most part being drawn backwards, exhibiting the muscles of the neck in a state of great tension. He is very restless, tossing about in bed, but as yet has shown none of the well-marked symptoms of opisthotonos. Pulse 100, weak. Ordered Calomelanos gr. ii., Pulv. Opii. gr. $\frac{1}{2}$, every three hours, to be blown into the mouth by means of a quill. For this purpose an incisor tooth was extracted.

December 1. Slept a little during the night; jaw more firmly closed; other symptoms unaltered. Ordered,

Chloroformi, ʒii.;

Tinet. Card. Co., ʒss.;

Aquæ, ʒi. M.

Sig. A teaspoonful every two hours.

Vespere. Respirations, 32. Expectorates a good deal of frothy mucus. Cannabis Indica administered per rectum.

December 2. Slept for about two hours. Breathing easier; pulse 86. The paroxysms of pain and restlessness not so frequent, although trismus is now complete. Some tea, injected through the opening whence the tooth had been extracted, was swallowed this morning. After spending a comfortable day, some relatives visited him in the afternoon, and he became very excited. Convulsions, taking the form of opisthotonos, supervened, and he died about 7 P.M.

Remarks.—I have detailed this case of tetanus as completing the *resumé* of the external injuries and their consequences, which forms the first part of this Report. Unfortunately, cases of tetanus have been of rather frequent occurrence of late years; but in well-marked acute cases I cannot say that the various remedial measures I have employed have been attended with any more favourable results than temporary alleviation of the symptoms, whilst the *post-mortem* investigations have thrown little or no light on its pathology. The case narrated, though possessing no special points of interest, is instructive, as exemplifying the trivial nature of the lesions which give rise to this formidable disease, and the insidious manner in which it supervenes. As to the treatment adopted, the use of the chloroform given internally was tried, from its apparently marked successful results in a case reported by Dr Fair, of Buenos Ayres, in this *Journal* for 1859–60, p. 640. In the case referred to, so far as we can judge of cause and effect in regard to remedies, its curative powers seemed well marked; but in the one just recorded, it seemed to produce no good, and had to be abandoned, as tending rather to induce paroxysms; still, I think it worthy of further trials—alternated with the inhalation of the vapour. Cupping and counter-irritation along the spine, and purgatives, combined with the internal use of Opium and Cannabis Indica, are what I chiefly trust to; but care should be taken that the two last-mentioned remedies be administered in solution, and not in a crude form, so that we may be more certain of their action being induced.

PART SECOND.

THE former part of this Report comprehended Injuries of the Head, Fractures, and Wounds. The cases remaining to be considered are here grouped as follows:—Tumours, Diseases of Bones and Joints, and Diseases of the Genito-urinary Organs: a few Miscellaneous Cases, and a *resumé* of the principal operations performed during the period, are added.

SECTION FIRST.—TUMOURS.

TUMOURS OF SOFT PARTS.

Of Lip.

1. Robert F——r, æt. 74. Epithelioma of lower lip. Excision. Cured.

2. Thomas A——r, æt. 65. Epithelioma of lower lip, of fourteen years' standing. Excision. Cured.

3. Aitken W——t, æt. 67. Epithelioma of six months' duration, preceded, however, by affection of glands in neck, which are enlarged, and over which the skin is discoloured, tense, and glistening. Operation not advised.

4. Alexr. E——r, æt. 70. Epithelioma of lower lip, of five years' standing. Excision. Cured.

5. George F——y, æt. 55, fisherman. Had an epithelial growth on lower lip removed eight years ago. A similar affection attacked the scrotum extensively, which was removed by Mr Spence two years ago. He has had no recurrence of disease in these parts. Two months before admission, he felt pain over larynx and difficulty of breathing, accompanied with disturbance of the general health. Poultices had been applied to the neck in front, where a swelling had begun to appear; and, after six weeks, matter made its way to the surface. On admission, patient is very emaciated. Immediately over thyroid gland, an opening as large as a shilling exists, with bright red, irritable edges, disclosing a mass of sloughy tissue, through which air passes during the acts of inspiration and expiration. Slough touched with nitric acid, and poultices applied. As the dead tissue projected, it was removed piece by piece, by forceps and scissors, and it became manifest that it was the thyroid cartilage and the isthmus of the gland. The edges of the ulcer were touched with nitrate of silver, and gradually contracted, so as to

prevent the abnormal passage of air. When patient left, a very small opening existed, which is said to have completely closed since. This case has been classed with the foregoing on account of its character.

Of Mamma.

6. Mrs Catherine M——e, æt. 62. Scirrhus mamma. Excision. Cured.

7. Jane B——n, æt. 58. Scirrhus mamma, one year's growth. Excision. Cured.

8. Margaret P——n, æt. 48. Scirrhus mamma. Excision. Cured.

9. Catherine M——l, æt. 50. Small scirrhus tumour of mamma, of twelve years' growth. Excision. Cured.

10. Jane H——n, æt. 53. Small scirrhus tumour of mamma, of seven years' standing; retraction and ulceration of nipple; no glandular enlargement. There was also a cystic tumour, the size of a pigeon's egg, on shoulder of same side, which had existed for twelve years. Both excised on the same day. Cured.

11. Fanny L——h, æt. 45. Recurrent scirrhus, with slight glandular enlargement. Patient suffered great pain from the disease, and anxiously desired an operation for the sake of temporary relief. Excision was performed; but pleuro-pneumonia set in on the third day, and proved fatal.

12. Mrs W——n, æt. 52. Medullary-cystic tumour of mamma, of one year's standing. Breast much enlarged; skin thin, discoloured, and adherent at upper and outer part, necessitating removal by elliptical incision directed downwards and outwards. The glands were not affected. Cured.

Of Back.

13. Ronald M——d, æt. 50. Cancroid ulcer, two inches in diameter, over sacrum; present for thirty years. Excision. Bleeding arrested by ligatures and compress. Third day after operation, raw surface rubbed over with chloride of zinc; poultices, and afterwards water dressing, applied. Cured.

14. John P——n, æt. 48. Fatty tumour on back, of ten years' growth. Excision. Cured.

15. John H——n, æt. 60. Fatty tumour on back. Excision. Cured.

Of Extremities.

16. David G——e, æt. 12. Medullary tumour in groin, of two years' growth. After a time, a smaller swelling of similar character appeared within the abdominal cavity, immediately above Poupart's ligament of same side, so that operative interference became contra-indicated.

17. Margaret M——d, æt. 60. Fourteen years ago, had the right breast removed for disease of two years' standing. Over right clavicle, a fatty tumour, the size of a duck's egg, has existed for nearly twenty years. Four and a half years ago, a soft swelling appeared at the upper and inner side of left groin; it is now the size of a small melon, pendulous, and possessed of a broad base. This latter tumour (also fatty) was removed first, and, after two months' interval, the pectoral one, with an equally good result.

18. James M——d, æt. 40. Large cancrioid ulcer over thigh and knee-joint—result of burn. Refused to submit to treatment.

19. James G——n, æt. 55. Cancrioid ulcer of leg, of twenty years' duration; tibia nearly destroyed at the lower third by the diseased process; ulcer liable to frequent attacks of copious hæmorrhage, by which patient was rendered very anæmic. Amputation at lower end of femur by long anterior flap of skin. Only one vessel (the femoral) required ligature. Recovered.

20. John C——s, æt. 24. Horny calcosities on heels, cylindrical and truncated, measuring an inch in diameter and half an inch in thickness. Poulticed for a time, then removed by elevator. The secretive papillæ afterwards dressed with Aqua Potassæ and Acetic Acid alternately. Cured.

21. David G——n, æt. 33. Fibrous growth on great toe, of three and a half years' standing. Excision. Cured.

22. Thomas W——n, æt. 14. Vascular tumour of little toe, resembling nævus. Amputation. Recovered.

TUMOURS OF BONE.

1. James P——n, æt. 32. Cystic tumour of upper jaw. Portion of wall removed. Cured.

2. Alex. M——r, æt. 30. Ditto, ditto.

3. Barbara M——l, æt. 59. Soft cancer of lower jaw, with infiltration of all the neighbouring textures. Died.

4. Janet D——r, æt. 40. Carcinomatous tumour of superior maxilla. Unsuitable for interference.

5. John H——r, æt. 12. Chronic abscess of antrum. Removal of part of wall of antrum. Cured.

6. Patrick C——y, æt. 23. Tumour of femur. As patient was perfectly fatuous, and liable to periods of occasional excitement, nothing was done.

Remarks on the Cases of Tumours.—I may describe the cases reported under this head as divided into three classes,—Simple, Malignant, and what I would denominate Pseudo-malignant Growths.

The simple growths consisted of fatty, fibrous, erectile, and encysted tumours: the majority of the minor cases not being treated in the Hospital, they do not appear in the Report. It may be noticed here, that, in three cases, fatty or cystic tumours existed in

patients who were or had been the subjects of malignant growths—the former having in no way undergone alteration in structure or character. The cases of simple tumour demand no very special notice. The only one which was at all remarkable was that removed from the thigh of the woman M——d (17), which was of great size, somewhat irregular in form, and nodulated. It lay over the course of the vessels, but was quite superficial to them, though adherent at one point to the fascia. This patient had formerly had her breast excised for what, she says, the surgeon stated to be cancer; and at the time of that operation had also another fatty tumour in the neighbourhood of the diseased breast, which the surgeon left, telling her that it was harmless. This growth, it will be noticed, I removed subsequently to that from the thigh.

The forms of malignant tumours which presented themselves for treatment were,—scirrhus and medullary-cystic of the mamma, medullary of the groin and of the upper jaw, and epithelial cancer. The medullary cyst is rather a rare form of mammary tumour. In the case of Mrs W——n (12), it had all its ordinary history of rapid growth, and tendency to involve directly other tissues, before apparently affecting the glands through the lymphatics; and examination of its structure after removal showed that the walls of the cyst were composed of medullary sarcoma. Amongst the cases of epithelioma, that of George F——y (5) serves to prove that this form of disease is not so local as is often stated, but that it is constitutional, just like other forms of cancer. Eight years ago, he had a cancer of the lower lip removed successfully—no return taking place in the lip or neighbouring glands—but the epithelial cancer recurred in the scrotum, of formidable character, requiring the excision of the greater portion of the scrotal integuments, and a part of the right tunica vaginalis which was affected. This operation also proved completely successful as regarded the local growth, but still the constitutional tendency showed itself by the recurrence of a similar disease in the front of the neck. Here, from the depth and nature of the parts affected, excision could not be practised, and the treatment was limited to the use of escharotics; these, aided by the low vitality of the dense texture affected, produced destruction and evolution of the mass in the form of slough; and, except for the small aperture over the trachea, the patient left apparently free from local disease, though, I fear, from the diminishing intervals of recurrence, the prognosis is unfavourable.

The cases of medullary tumour of the thigh and upper jaw were characteristic examples of the rapidity with which that form of malignant growth develops itself, and also of its want of definition or real limitation—conditions which render operative measures so uncertain of accomplishing its complete removal. In the case of the boy G——e (16), although the malignant nature of the tumour was evident, still it was apparently so defined as to encourage me to think of removing it; but, as there was a slight fulness felt in the abdo-

minal parietes, I determined to wait, and in the course of a few days the fulness developed itself into a distinct tumour, of similar character to that in the groin—of course contra-indicating any operation.

The case of G——n (19) stands in some measure in contrast with those last referred to. The warty, ulcerated surface, the destruction of the bone and other textures, the excessive pain, the rapidity of increase which had latterly characterized it, combined with the anxious expression and pale yellow colour of the face, the quick pulse, and general debility, gave all the appearance of advanced malignant disease; and the enlarged glands in the groin seemed to contra-indicate amputation. But experience in similar cases led me to have no hesitation in operating, because the history of the case, as regarded the original character of the ulcer and its slow progress, satisfied me that it was merely a local canceroid, or pseudo-malignant sore, supervening on a chronic ulcer and involving the periosteum—the debilitated condition of the patient arising from the long-continued discharge and pain, and the enlarged inguinal glands being the result of simple irritation. Accordingly, when the limb was removed, the swelling of the glands rapidly disappeared, the man made an excellent recovery, and lost all appearance of the malignant cachexia.

NECROSIS.

Of Lower Jaw.

1. Mary S——e, æt. 5. Necrosis of great part of lower jaw; sequestrum quite loose; removal. Cured.
2. Fred. K——x, æt. 24. Necrosis of lower jaw, depending on the presence of two carious teeth. After extraction of teeth, two small pieces of bone came away through the gum.

Of Humerus.

3. William B——y, æt. 35. Necrosis of upper part of humerus, following gunshot wound received during Crimean war. Seventeen pieces of bone had been removed at Haslar; still the sinuses did not heal. A dense piece of the shaft, half an inch in length and breadth, was now removed. Cured.
4. Alex. M——l, æt. 19. Acute necrosis of humerus, extending close up to joint, and accompanied with an exceedingly small amount of substitute bone; large sequestrum removed. Cured.

Of Radius.

5. Eliz. S——n, æt. 13. Necrosis of radius, at first simulating phlegmonous erysipelas in its symptoms; large sequestrum removed. Cured.

Of Bones of Hand.

6. Eliz. B——n, æt. 19. Necrosis of metacarpal bone from injury; healed without apparent exfoliation.

7. Alex. D——n, æt. 38. Necrosis of phalanges of thumb, resulting from injury; amputation was followed by pyæmia. Died.

8. Alex. F——n, æt. 75. Necrosis of phalanges of thumb, in consequence of neglected paronychia; amputation. Cured.

9. Agnes W——n. Same as last; amputation. Cured.

10. William M——e, æt. 22. Necrosis of finger; amputation. Cured.

Of Femur.

11. Alex. K——d, æt. 34. Necrosis of lower end of femur, and abscess in knee-joint; amputation by long anterior flap. Cured.

12. William L——t, æt. 10. Necrosis of lower part of femur, which took many months to separate; sequestrum removed. Cured.

13. Margaret S——d, æt. 13. Necrosis at lower end of femur, of two years' standing, close to and implicating joint. Amputation by modification of Teale's method. Cured.

14. D. G——h, æt. 12. Necrosis of femur near condyles. A large exfoliation removed. Cured.

15. M. P——r, æt. 6. Acute necrosis of shaft of femur. Patient was taken home before bone was loosened.

Of Tibia.

16. Thomas S——w. Small exfoliation from tibia. Cured.

17. John B——e, æt. 13. Acute necrosis of tibia, from which he had nearly recovered, when the leg was seized with erysipelas. Abscesses formed, and the knee-joint came at length to be distended with pus. Irritative fever now merged into hectic; and the limb was amputated through middle of thigh, by flaps of skin. Cured.

18. James H——p, æt. 15. Had acute necrosis of tibia in 1858. Several portions removed, and limb nearly cicatrized when he left the hospital; now perfectly recovered.

19. John R——e, æt. 19. Necrosis of upper part of tibia, following injury. Two pieces removed. Cured.

20. Neil W——e, æt. 10. Necrosis of tibia. Two sequestra removed, and limb laid on leather splint. Cured.

CARIES.

Of Vertebrae.

1. Donald M——d, æt. 14. Spinal curvature, with enormous collections of matter in groins and nates. Rest; actual cauterization.

and prone couch for a time; the abscesses were not opened. Sent home, with general health improved.

2. James R——e, æt. 15. Manifested all the symptoms peculiar to disease in the higher vertebræ. Was much relieved by blisters, actual cautery, rest, and good diet. Afterwards used a leather stock.

3. Alex. W——s, æt. 9. A recent case of Potts' curvature, treated as above. An abscess formed over projecting spine, and was opened from the ulcerated surface caused by cautery. A spinous process and part of a vertebral lamina separated. Convalescent.

4. James C——m, æt. 60. Caries of sacrum. Dismissed *in statu quo*.

Of Bones of Extremities.

5. Alison B——r, æt. 18. Caries of metacarpal bone. Amputation of bone and attached finger. Cured.

6. Angus C——n, æt. 39. Caries of trochanter. Relieved.

7. William F——r, æt. 45. Caries of both patellæ, caused by sleeping all night before a furnace fire. Relieved.

8. John M——e, æt. 24. Ribs and os calcis carious. Free vent given to pus: good diet; Tinct. Mur. Ferri. Relieved.

9. David S——e, æt. 15. Caries of os calcis. Rest; afterwards blister. Relieved.

10. John H——n, æt. 12. Caries of first metatarsal bone. Amputation. Cured. Patient had also a small sequestrum removed from fibula of same leg.

SECTION SECOND.—DISEASES OF JOINTS.

Hip-Joint.

1. James M——l, æt. 40. Chronic rheumatic inflammation. Corrigan's cautery; rest; Iod. Potass. Cured.

2. Agnes W——n. Synovitis following blow. Rest and fomentations effected a cure.

3. John W——e, æt. 24. Morbus coxæ of 12 months' standing. Actual cautery and long splint. Relieved.

4. Margaret H——s. Chronic rheumatic synovitis. Corrigan's cautery; rest; Iod. Potass. Cured.

5. Mary M——c, æt. 16. Morbus coxæ. Cautery and long splint. Cured.

Knee-Joint.

6. Jane L——r, æt. 21. Loose fibrous bodies in knee-joint, giving rise to pain and weakness. Bandages with Emp. Saponis around joint; rest in wire splint, with blister, and afterwards actual cautery. Slight improvement.

7. Mary D——c, æt. 26. Suffered from disease of knee-joint for 15 years, unfitting her for any employment. On admission,

joint enlarged ; heads of tibia and fibula swollen and painful ; numerous nodular bodies, moveable, but attached to synovial membrane. After much palliative treatment, the joint was excised, and the limb placed on Fergusson's splint. Patient sank under pyæmia on sixth day.

8. Henry S——e, æt. 7. Contraction of knee-joint, with partial ankylosis of patella to femur—the result of chronic synovitis. Hamstring tendons divided, and limb straightened on a wire splint. Improved.

9. Ann W——t, æt. 29. Acute synovitis, following long-standing inflammation of joint. Rest on splint ; fomentations ; Scott's plaster. Cured.

10. John R——e, æt. 23. Bruise of joint between railway buffers. When brought to hospital, patient was labouring under double pneumonia. He died on the fifth day.

11. Joseph C——g, æt. 14. Ulceration of cartilages. Resisted palliative means ; amputation at lower third of thigh by Teale's method. Recovered.

12. James F——y, æt. 24. Loose fibrous body in joint. Treated with palliatives, *e.g.*, rest and bandages.

13. Miles S——h, æt. 28. Ulceration of cartilages, going on to the formation of abscesses in joint. Refused to submit to amputation.

14. Saunders J——n, æt. 20. Synovial degeneration of five years' standing, ending in ulceration of cartilages and abscess. Amputation at lower third of thigh by long anterior flap. Recovered.

15. William M——t, æt. 22. Acute synovitis after blow. Rest ; fomentations ; use of wire splint ; iodine ; and bandages. Cured.

16. Ann M——n. Synovial degeneration, with ulceration of cartilages. Rest in splint ; fomentations ; Scott's plaster. Partial ankylosis took place. Cured.

17. William C——s, æt. 9. Ulceration of cartilages. Amputation at middle of thigh by long anterior flap ; necrosis of end of bone. Cured.

Ankle-Joint and Tarsus.

18. John V——e, æt. 22. Gelatinous disease of ankle. Amputation ; slow cicatrization in consequence of phthisical state of lungs. Dismissed convalescent.

19. John H——e, æt. 9. Caries of os calcis and lower end of fibula. Amputation at ankle-joint by large internal flap. Recovered.

20. Mary K——r, æt. 8. Disease of ankle. Amputation. Recovered.

21. William D——k, æt. 13. Caries of tarsus. Amputation. Recovered.

22. Robert F——n, æt. 14. Caries of tarsus. Amputation. Recovered.

23. Peter S——y, æt. 9. Caries of tarsus, the result of a blow. Patient of strumous diathesis. Amputation at ankle. Recovered.

Shoulder-Joint.

24. Mary M——y, æt. 35. Synovitis following blow. Fomentations; blister. Cured.

25. Sarah O——n, æt. 16. Omalgia. Cautery. Cured.

There were many others of similar character.

Elbow-Joint.

26. John M——r, æt. 18. Ulceration of cartilages. Actual cautery. Relieved.

27. Andrew H——n, æt. 17. Anchylosis of elbow, following extensive necrosis of humerus. Excision. Recovered.

28. William M——d, æt. 26. Synovitis of joint, with syphilitic taint. Fomentations and Iodine externally; Potass. Iod. with Sol. Arsen. internally. Cured.

29. Margaret N——n, æt. 14. Suffered a wound of bursa over olecranon, which was followed by suppuration extending into the joint. Excision. Recovered.

30. James G——w, æt. 8. Synovial disease of joint, with ulceration and abscesses. Excision. Convalescent.

Carpus.

31. John W——t, æt. 12. Disease of carpus of several years' standing, with abscesses and ulceration around wrist. Limb laid on splint, and sores dressed with weak stimulating lotions. Internally, Ol. Morrhuæ, Tinct. Ferri Mur. Improved.

32. James S——e, æt. 8. Same as above. Patient's health began to suffer; but his friends would not allow operative measures, and removed him. He died exhausted some weeks afterwards.

Dislocations.

James B——d. Dislocation of hip upwards and backwards. Treated in the country for a fortnight with leeches and blisters; reduced by pulleys while patient was under chloroform.

Of the shoulder and elbow, many cases presented themselves, but were very rarely retained in the hospital.

Remarks on the Cases of Disease of Bones and Joints.—These formed, as usual, a very large proportion of the cases treated, but unfortunately they are of too common occurrence to present much room for remark. Amongst the cases of necrosis there will be found several in which, by careful and patient treatment, and the performance of resection for the extraction of sequestra, the patients were

dismissed cured, with useful limbs. And in those where amputation was performed, it was only resorted to when, from neighbouring joints becoming affected, and the patient sinking from hectic, the operation was rendered imperative. Two of the most gratifying cases were those of the boys M——l (4) and H——p (18). In the former, the upper part of the humerus had been attacked with acute necrosis, and there seemed cause to fear that the shoulder-joint was implicated, whilst he was much exhausted from the disease; but by waiting, and supporting his general health, he gradually improved. Some substitute bone formed, and I determined to try resection instead of amputation, unless I found a very large amount of the shaft bare. With this view I made a very free longitudinal incision, and was happy to find that the upper part of the shaft had separated, leaving the epiphysis healthy; then, by splitting up the necrosed portion of the shaft, I was enabled to remove, with very little loss of substitute bone, a dead portion, about two inches long and of the whole circumference of the shaft, immediately below the head of the humerus. The boy made a good recovery with a perfectly useful arm.

In H——'s case, the disease was of long duration. Sequestra had been removed at various times from different parts of the tibia, and one near the ankle-joint now gave rise to great irritation, and threatened to involve that articulation. It was deeply imbedded, and so imprisoned by the substitute bone as to be immovable. To reach and remove it, I had to take away, partly with the trephine and partly with small saw and bone pliers, a dense ivory-like bone an inch and a half in thickness; but after the extraction all irritation ceased, and the lad is now quite well and can walk long distances. Another boy, B——e (17), who was in the same ward, was not so fortunate. He had suffered from acute necrosis,—large sequestra had separated and been removed, and the wound had all but healed; when, on the eve of his dismissal as cured, he was seized with an erysipeloid affection of the leg and thigh, accompanied by great general fever and sore throat, his tongue also presenting all the appearance of a case of scarlet fever. As the redness of the leg disappeared, the knee-joint became affected, the urine was highly albuminous, the soreness of the throat increased in severity, and vomiting occurred. These conditions did afterwards somewhat ameliorate, but the knee-joint suppurated and gave rise to excruciating agony. Under these unfavourable conditions, as soon as he could take and retain some nourishment, I amputated the thigh at the middle third, and, strange to say, he made one of the most rapid recoveries I almost ever saw, after the amputation.

The patients suffering from affections of the joints who come under treatment in hospital, seldom apply until the disease has made such progress as not to give a fair chance to curative measures; yet, even with this disadvantage, those who leave cured or relieved are far more numerous than those who are subjected to operation.

The fact is, that the cases operated on by excision or amputation attract more attention and interest than those which are cured, and hence exaggerated notions are entertained as to the proportion of operations in this class of diseases. It is unfortunately too true, that amongst hospital patients diseases of joints which have been relieved or completely cured at one time, recur, and necessitate operative measures; but this is due to the circumstances and habits of such patients. In the first place, they are not very tolerant of the restraint and prolonged treatment necessary for a thorough cure, but are desirous to leave when the more urgent symptoms are relieved; and when they return to their homes, the necessity for labour, involving the use of the affected limb, the want of nutritious diet, and exposure to cold and other exciting causes, reproduce and aggravate the disease.

Amongst the cases recorded where operation was had recourse to, it will be noticed that there was only one of excision of the knee-joint. The reason why amputation of the thigh was resorted to in the other cases of diseased knee-joint, was owing to the nature and extent of the disease in some, and in others to the youth of the patient; for I have long felt satisfied of what is now beginning to be admitted after time has proved it, that the limb after resection in young patients is not so fully developed as to be ultimately useful.

SECTION THIRD.—DISEASES OF GENITO-URINARY ORGANS.

Stricture of Urethra.

John C——e, æt. 44. Stricture of urethra, with an abscess in perineum, which had discharged itself by a small opening a few days before admission. Opening freely enlarged. Cured by dilatation.

Robert C——n, æt. 72. Stricture of 30 years' standing, complicated with perineal abscess and enlarged prostate; abscess had opened into urethra. Perineum incised from without; and at the same time the stricture situated about an inch anterior to the bulb was divided. Cured.

John F——e, æt. 57, for last two years suffered from stricture. On admission, it was found to be complicated with perineal abscess, which was opened at once. A week afterwards, the stricture was divided, and a No. 8 catheter tied in for 24 hours, which, on being withdrawn, was replaced by a gum-clastic catheter for the same length of time. On the third day there was a little irritation around wound; ordered a poultice. In the course of the day he had a rigor, and next morning some varicose veins in the left leg became inflamed, and abscesses formed. This was followed by abdominal and thoracic pains, severe headache, and convulsions and coma, terminating in death. No *post-mortem* allowed.

There were eleven cases of stricture successfully treated by dilatation.

Fistula in Perineo.

John T——s, æt. 40. Fistula in perineo. Incision; and afterwards introduction of heated wire. Cured.

Fungous Testicle.

James D——s, æt. 38. Syphilitic fungous testicle. Poultices to remove sloughs; afterwards closed in by paring edges of scrotal sore, and securing them by silver suture. Cured.

John M——d, æt. 24. Enormous syphilitic fungoid testicle; treated as above. After bleeding; extensive phlegmonous erysipelas attacked the side and back, and he died on the fourth day after the operation.

Varicocele.

James F——y, æt. 26. Varicocele. A large elliptical portion of scrotum, which was very loose and pendulous, was removed, and a natural suspensary thus formed.

Vesical Calculus.

David K——d, æt. 49. Calculus in bladder. Removed by lateral operation. Cured.

James C——d, æt. 12. A stone of considerable size was successfully removed from the bladder.

Rupture of the Bladder.

James C——e, æt. 25. On the 26th May 1860, at 5 A.M., patient fell out of a cart, and, being slightly intoxicated at the time, did not immediately thereafter perceive any unusual sensations. About 7 A.M. he walked into the Surgical Hospital, complaining of pain at the lower part of thorax on both sides, and inability to micturate. No fracture could be detected; and as he objected to the catheter being passed, he was forthwith dismissed. At 4½ P.M., patient returned with increased desire to make water, great pain over hypogastric region, and tenderness over the abdomen generally. No vesical protuberance could be detected; dulness only reached three inches above pubes, but extended across both iliac regions. No. 10 catheter was introduced, and about 3vi. of bloody urine and clots came away. *Vespere*, 8½. Patient suffered great abdominal pain, with constant desire to micturate. Pelvic dulness slightly increased. 3lxxx. of bloody urine drawn off by catheter, which seemed to pass through the coats of the bladder. From this period an instrument was passed every six hours; but already the general and local symptoms of peritonitis manifested themselves, and, gradually becoming more intense, the patient sank at 5 A.M. on the 29th, exactly 72 hours after the occurrence of the accident. A *sectio* was not permitted by his friends.

Remarks.—The diseases of the Genito-urinary system comprised a large number of stricture cases, two of calculus, etc.

The most interesting case, as bearing upon the diagnosis of different forms of ruptured bladder, was that of the man C—e, which I have detailed in full. I felt little doubt that this was one of those instances of ruptured bladder where the urine escapes freely into the peritoneal cavity, the diagnostic symptoms distinguishing it from cases where the ruptured bladder allows only a small portion of its contents to escape; but, unfortunately, the principal value of the case was lost through the obstinate refusal of the relatives to permit any examination of the body. Still, I give the notes of the case, as taken at the time, as in themselves interesting.

SECTION FOURTH.—MISCELLANEOUS.

Hernia.

Andrew C—d, æt. 43. Inguinal hernia, strangulated for 24 hours. Operation. Cured.

Diseases of Rectum.

Besides numerous cases of hæmorrhoids and fistula in ano, which were treated in the ordinary manner, there were three examples of cancer, to which palliatives only were applied.

Frost-bite.

Three cases of frost-bite presented themselves during the winter. Poultices of moderate temperature were applied to the gangrenous parts, and the surrounding erythema preserved from irritation by being enveloped in cotton wadding. Patients were at the same time placed upon a nourishing non-stimulating diet.

OPERATIONS.

AMPUTATION.

1. *At Hip-Joint.*

Walter W—, æt. 38. Laceration of thigh by explosion of gunpowder. By large posterior flap. Died.

2. *Thigh.*

Margaret S—, æt. 13. Necrosis. Long anterior flap. Recovered.

Alexander R—, æt. 34. Necrosis. Long anterior flap. Recovered.

John B—, æt. 13. Necrosis, and abscess in knee-joint. Flaps of skin. Recovered.

- Joseph C——, æt. 14. Disease of knee. (Teale.) Recovered.
 Walter H——, æt. 36. Compound comminuted fracture of leg.
 Long anterior flap of skin. Died.
 Sanders J——, æt. 23. Disease of knee. Long anterior flap.
 Recovered.
 William C——, æt —. Disease of knee. Long anterior flap.
 Cured.
 James G——. Cancroid ulcer of leg. Long anterior flap.
 Cured.
 J. M——, æt. 3. Disease of knee. Long anterior flap. Cured.

3. *Leg.*

- Francis P——, æt. 35. Compound comminuted fracture. Long
 posterior flap. Recovered.
 Duncan C——, æt. 43. Compound comminuted fracture. Long
 posterior flap. Died.

4. *Ankle.*

- John V——, æt. 22. Gelatinous disease. Convalescent.
 John H——, æt. 9. Caries. By internal flap. Recovered.
 Mary R——, æt. 8. Caries. Recovered.
 William D——, æt. 14. Disease of tarsus. Recovered.
 Robert F——, æt. 14. Disease of tarsus. Recovered.
 Peter S——, æt. 9. Disease of tarsus. Recovered.

The partial amputations of hand and foot amounted in all to 36 ;
 but it is not necessary to detail each case.

EXCISION OF JOINTS.

- Andrew H——, æt. 17. Anchylosis of elbow. Cured.
 Margaret N——, æt. 14. Disease of elbow. Cured.
 ———, æt. —. Disease of elbow. Cured.
 Mary O'D——, æt. 26. Disease of knee. Died.

EXCISION OF TUMOURS.

- Robert F——, æt. 74. Epithelioma of lip. Cured.
 Thomas A——, æt. 65. Epithelioma of lip. Cured.
 Ronald M'D——, æt. 50. Cancroid growth over sacrum. Cured.
 David G——, æt. 33. Fibrous tumour of great toe. Cured.
 Margaret M'D——, æt. 60. Fatty tumour in groin, and also
 another over clavicle. Both excised. Cured.
 John H——, æt. 60. Fatty tumour on back. Cured.
 John P——, æt. 48. Fatty tumour on back. Cured.
 Alexander E——, æt. 70. Epithelioma of lip. Cured.
 Thomas W——, æt. 14. Vascular tumour of toe. Amputation.
 Cured.

EXCISION OF MAMMA.

- Catherine M——, æt. 62. Scirrhus mamma. Excision. Cured.
 Jane B——, æt. 58. Scirrhus mamma. Excision. Cured.
 Margaret P——, æt. 48. Scirrhus mamma. Excision. Cured.
 Jane H——, æt. 53. Scirrhus mamma, with small cystic tumour
 on shoulder. Excision. Cured.
 Fanny L——, æt. 45. Recurrent scirrhus mamma. Excision.
 Pleuro-pneumonia. Died.
 Catherine M'N——, æt. 50. Scirrhus mamma. Excision.
 Cured.
 Mrs W——, æt. 54. Tumour of mamma. Excision. Cured.

HERNIA.

- Andrew C——, æt. 43. Inguinal hernia. Cured.

LIGATURE OF ARTERIES.

- A child, æt. 2. Wound of radial. Cured.
 George L——. Wound of radial and superficial volar. Cured.

LITHOTOMY.

- David K——, æt. 49. Lateral operation. Cured.
 — C——, æt. 12. Lateral operation. Cured.

PERINEAL SECTION.

- Robert C——, æt. 72. Cured.
 John F——, æt. 57. Pyæmia. Died.

TREPAN.

- Christina S——, æt. 36. Compression following wound of scalp,
 with necrosis. Recovered.

Remarks on the Operations—Amputations.—The cases of amputation were, in all, 18—viz., 1 at the hip-joint, 9 of the thigh, 2 of the leg, and 6 at the ankle. The case of the amputation at the hip has already been noticed under the head of Wounds; and I would only remark here, that the plan of operation by a posterior and external flap was not matter of choice, but from the necessity of taking the flap from the parts which had escaped injury. Of the nine amputations of the thigh, there was only one fatal result, and that in a case of primary amputation for railway injury, in which pyæmia set in at a late period. In all the remaining cases, the results, both as regarded the healing of the wound and the form of the stumps, were most satisfactory. In all cases where it could be adopted, I amputated

by the plan of a long anterior flap—the modification of Teale's method, to which I drew attention in my Clinical Report of last year, and of which further experience confirms my favourable anticipations. It is both simpler in performance, the flap more readily adjusted and retained, and the form of stump at least equal to that formed by the very long square flap folded on itself, as recommended by Teale. In some cases, however, as in that of the boy B——, or in cases of primary amputations for injury, the state of the soft parts renders it necessary to adopt other methods, so as to amputate as low in the thigh as possible; and then I generally prefer flaps of skin, leaving only a moderate amount of muscular tissue round the bone.

The amputations below the knee present a very unfavourable average; but this depends, I think, on the fact that they are almost always primary—the ankle-joint operation having superseded this amputation in a very large proportion of the cases in which it used to be performed for disease of the foot and ankle. In the fatal case mentioned in the Report, the man's health was impaired by his previous habits. He had lost a large quantity of blood before he was discovered, and had been lying exposed in a cold and wet night, besides having received other injuries; so that the prognosis was by no means favourable, although the operation was imperative, as affording the only chance for life.

The amputations at the ankle-joint do not call for remark. They presented the usual successful results, both as regards the formation of good stumps and safety to life; and my own experience of this amputation, whether performed by Mr Syme's method or the large internal flap, leads me to consider it the most satisfactory of all amputations.

Amongst the cases of excision of the joints, there was only one of excision of the knee-joint, and it terminated in the death of the patient. The case was that of the girl D——, mentioned under Diseases of Joints. The disease which led to the operation was ulceration of the cartilages and the subjacent osseous surfaces, resulting from fimbriated disease of the synovial membrane. She had suffered from the disease for several years; and, as the floating bodies became larger and more numerous, the pain had become very severe, and she had for some time been unable to use the limb so as to follow her ordinary avocations. When she had been under treatment for some weeks, it became evident from the symptoms—the pain on pressing over the head of the tibia, and the excessive pain and starting of the limb at night—that acute ulceration of the cartilages and articular surfaces of the bones had taken place. I accordingly performed excision. The operation was easily executed; comparatively thin sections of the tibia and femoral condyles required to be removed; the altered synovial membrane, with numerous groups of pedunculated masses, were dissected off; there was little bleeding, and very few vessels required to be tied. The wound was dressed and adjusted in the

usual way, and everything seemed to promise fair for a successful issue; but she was restless and depressed from the first. Symptoms of acute pyæmia set in, and the patient died eight days after the operation. It appears difficult to account for the unfortunate result in a case where the disease seemed so local, and where the general health had only suffered for a short time, except on the view that the peculiar affection of the synovial membrane is one where operations are unusually dangerous; and certainly, when we consider how frequently disastrous results follow even the slightest and most carefully conducted operations in cases of loose cartilages, there does seem reason to think that there must be some peculiarity connected with it which leads to the development of unfavourable results.

The principal operations on the urinary organs were two for lithotomy, and two of perineal section for stricture of the urethra.

In both the cases of lithotomy the lateral operation was performed under chloroform with success. In the case of the man K—, two calculi were removed. In the boy C—'s case the stone was very large in proportion to the space through which it had to be extracted, yet he never had a bad symptom after the operation.

Of the two cases of perineal section, one had a fatal termination. The patient had a very bad, irritable stricture, which had been repeatedly dilated and had again returned, and he now suffered great irritation whenever an instrument was passed. He was of dissipated habits, and had long suffered from varicose veins. The operation was easily performed, with almost no bleeding; and a No. 9 silver catheter was introduced, which was changed for a gum catheter at the end of twenty-four hours, the latter instrument being withdrawn at the end of forty-eight hours. The urine flowed freely, principally by the wound, but partly by the urethra; and he never had any pain or uneasiness there, nor in the abdomen; but on the eighth day he had a rigor, and the next day complained of pain in his leg, which was found to be erythematous, the varicose veins being extremely painful to the touch. The inflammation of the veins extended, and he ultimately died with all the symptoms of pyæmia. How far this condition was the result of the perineal section I leave others to judge; I can only say that, as regards the irritation of the parts operated on, he never suffered more, if so much, as he had often done after the introduction of a catheter. The successful case stands in strong contrast to the one just related, whether considered in reference to the unfavourable conditions under which it was performed, or the advanced age and previous exhaustion of the patient. I was summoned to see him at the house where he lodged; and, from the statement made to me, I supposed it was a case of retention from enlarged prostate. I found him straining violently to pass water, which he voided drop by drop. On examining the prostate per anum, I felt it greatly enlarged; but when he saw the

prostate catheter, he told me that he had suffered from stricture for more than thirty years, and that latterly no larger instrument than a No. 2 could ever be passed, and that it had not been passed for more than a year. On examining the perineum, I found it hard, and somewhat swollen and red; the urethra, immediately anterior to the bulb, felt firm and cartilaginous; and at this point the large catheter was arrested. As I had no small instruments with me, I had him brought to the Hospital, and after some considerable difficulty succeeded in passing the smallest grooved stricture staff, and performed the perineal section, making the incision longer than usual, to afford free vent to the pus which had begun to form. An ordinary No. 9 silver catheter then readily passed through the strictured part; but, owing to the enlarged prostate, I could not lodge it in the bladder, and, accordingly, I had to withdraw it, and substitute a large gum-elastic catheter, which entered readily, and evacuated a large quantity of foetid urine. Notwithstanding the age of the patient (72), his worn-out constitution, and the complications of the case, he made an excellent recovery, and continued to pass his urine in a full stream.

As regards this operation in general, after having performed it very frequently, I feel quite satisfied that, if the constitution has not been too much undermined, and if there be no great amount of organic disease of the kidney, it is attended with but little danger, and is by far the most satisfactory method of treating indurated, irritable, and resilient strictures.

I cannot conclude without acknowledging my obligations to my late Resident-Surgeon, Dr Maclaren, for the care and labour bestowed in preparing the synoptical part of this Report.